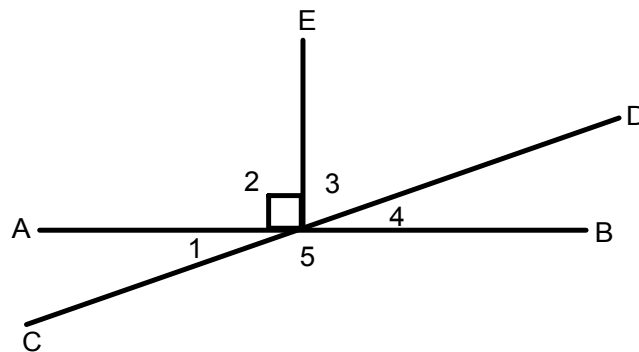


Bell Work: 5 minutes to solve, use your notes!

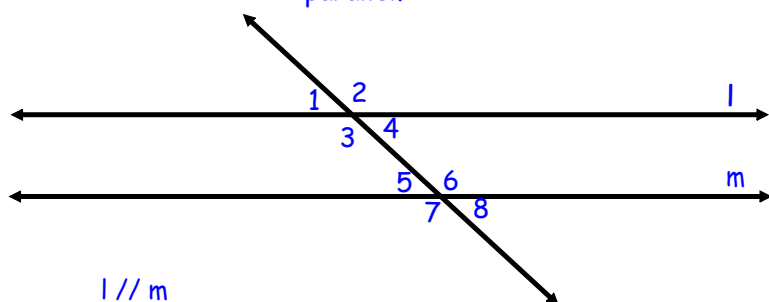


State the relationship between the following angles:

- | | |
|-------------------------------|---------------------------------|
| (a) $\angle 1$ and $\angle 4$ | (d) $\angle 4$ and $\angle 5$ |
| (b) $\angle 3$ and $\angle 4$ | (e) $\angle 1$ and $\angle 3$ |
| (c) $\angle 1$ and $\angle 2$ | (f) $\angle AOD$ and $\angle 5$ |

Definition: In a plane, a line is a transversal if and only if it intersects two or more lines, each at a different point.

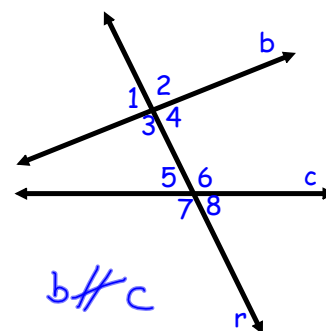
the lines cut by a transversal may or may not be parallel.



interior angles lie between two lines

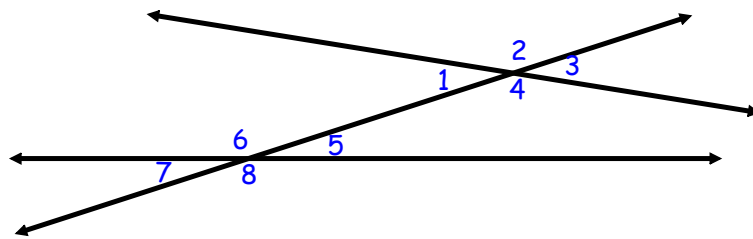
alternate interior angles are on opposite sides of the transversal

consecutive interior angles are on the same side of the transversal



exterior angles lie outside the two lines

alternate interior angles are on opposite sides of the transversal



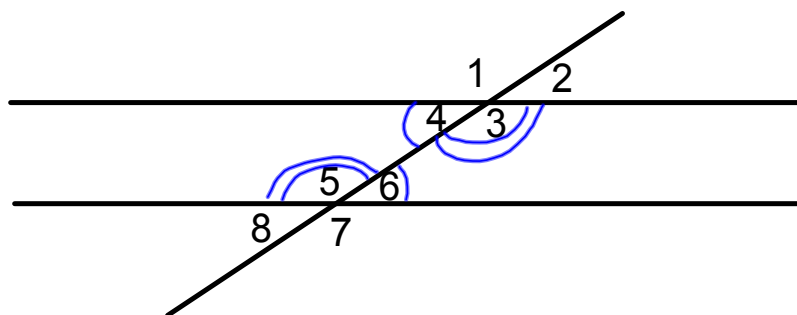
Identify each pair of angles as alternate interior, alternate exterior, consecutive interior or vertical.

$\angle 2$ and $\angle 8$

$\angle 1$ and $\angle 6$

$\angle 2$ and $\angle 4$

$\angle 4$ and $\angle 6$

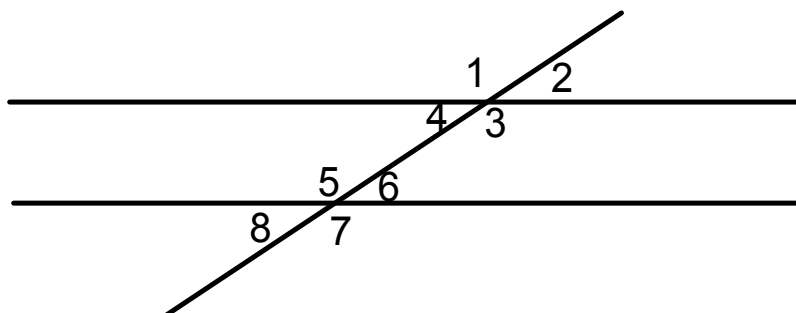


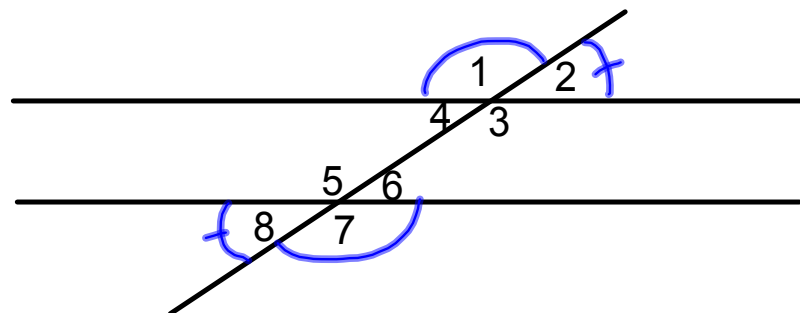
If two parallel lines are cut by a transversal, then each pair of alternate interior angles is congruent.

$\angle 3 \cong \angle 5$

If two parallel lines are cut by a transversal, then each pair of consecutive interior angles is supplementary.

$$m\angle 4 + m\angle 5 = 180^\circ$$
$$m\angle 3 + m\angle 6 = 180^\circ$$

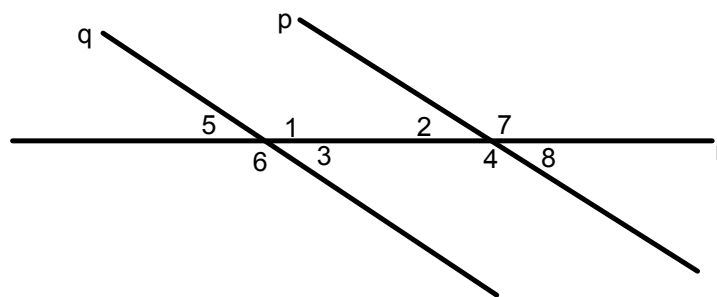




If two parallel lines are cut by a transversal, then each pair of alternate exterior angles is congruent.

\simeq

\simeq



$p \parallel q$. If $m\angle 5 = 28$

find:

$m\angle 8$

$m\angle 1$

$m\angle 2$

$m\angle 3$

$m\angle 4$

homework:

$r \parallel t$
find $m\angle 1$
 $m\angle 2$

